

Amendments to the Claims

Claim 1 (currently amended): A fluorescent protein which is derived from Green Fluorescent Protein (GFP) or any functional GFP analogue and has an amino acid sequence which is modified by amino acid substitution compared with the amino acid sequence of wild type Green Fluorescent Protein having the sequence of SEQ ID NO: 2, said modified fluorescent protein comprising:

- i) an amino acid substitution at position F64;
- ii) a single amino acid substitution at a position selected from the group consisting of positions S65 and E222; and
- iii) an amino acid substitution at position S175;

wherein said modified GFP has a different excitation spectrum ~~and/or~~ a different emission spectrum compared with wild type GFP or has a different excitation spectrum and a different emission spectrum compared with wild type GFP.

Claim 2 (currently amended): ~~A~~The fluorescent protein ~~according to~~of claim 1, wherein the amino acid ~~F~~Phe at position 64 has been substituted by an amino acid selected from the group consisting of ~~L, I, V, A and G~~Leu, Ile, Val, Ala and Gly.

Claim 3 (currently amended): ~~A~~The fluorescent protein ~~according to~~of claim 1, wherein the amino acid ~~S~~Ser at position 175 has been substituted by an amino acid selected from the group consisting of ~~G, A, L, I and T~~Gly, Ala, Leu, Ile and Thr.

Claim 4 (currently amended): ~~A~~The fluorescent protein ~~according to~~of claim 1, wherein the amino acid ~~S~~Ser at position 65 has been substituted by an amino acid selected from the group consisting of ~~G, A, L, C, V, I and T~~Gly, Ala, Leu, Cys, Val, Ile and Thr.

Claim 5 (currently amended): ~~A~~The fluorescent protein ~~according to~~of claim 1, wherein the amino acid ~~E~~Glu at position 222 has been substituted by an amino acid selected from the group consisting of ~~G, A, V, L, I, F, S, T, N and Q~~Gly, Ala, Val, Leu, Ile, Phe, Ser, Thr, Asn and Gln.

Claim 6 (currently amended): ~~A~~The fluorescent protein ~~according to~~of claim 1, selected from F64L-S175G-E222G-GFP and F64L-S65T-S175G-GFP.

Claim 7 (currently amended): ~~A~~The fluorescent protein ~~according to~~of claim 1, further comprising an amino acid sequence which is modified by amino acid substitution compared with the amino acid sequence of wild type Green Fluorescent Protein having the sequence: ~~SEQ ID No.2~~SEQ ID NO: 2.

Claim 8 (currently amended): ~~A~~The fluorescent protein derived from Green Fluorescent Protein (GFP) and having the amino acid sequence as set forth in ~~SEQ ID No.3~~SEQ ID NO: 3.

Claim 9 (currently amended): ~~A~~The fluorescent protein derived from Green Fluorescent Protein (GFP) and having the amino acid sequence as set forth in ~~SEQ ID No. 4~~SEQ ID NO: 4.

Claim 10 (currently amended): ~~A~~The fusion compound comprising a protein of interest fused to ~~at the modified~~ fluorescent protein ~~said fluorescent protein being a modified protein according to~~of claim 1.

Claims 11-18 (cancelled)

Claim 19 (currently amended): A method of measuring the expression of a protein of interest in a cell ~~which method comprises~~comprising:

- i) introducing into a cell a nucleic acid molecule comprising a nucleotide sequence encoding a fluorescent protein which is derived from the Green Fluorescent Protein (GFP) or any functional GFP analogue ~~according to~~of claim 1, said nucleic acid molecule being operably linked to and under the control of an expression control sequence which moderates expression of said protein of interest;
- ii) culturing said cell under conditions suitable for the expression of said protein of interest; and
- iii) detecting the fluorescence emission of said Green Fluorescent Protein (GFP) or a functional GFP analogue as a means of measuring the expression of said protein of interest.

Claim 20 (currently amended): A method of determining the cellular and/or extracellular localisation of a protein of interest ~~which method comprises~~comprising:

- i) introducing into a cell a nucleic acid molecule comprising a nucleotide sequence encoding a fluorescent protein which is derived from the Green Fluorescent Protein (GFP) or any functional GFP analogue of claim 1 fused to a nucleotide sequence encoding a protein of interest, said nucleic acid molecule being operably linked to and under the control of a suitable expression control sequence;
- ii) culturing said cell under conditions suitable for the expression of said protein of interest; and
- iii) determining the cellular and/or extracellular localisation of said protein of interest by detecting the fluorescence emission by optical means.

Claim 21 (currently amended): A method of comparing the effect of one or more test substance(s) on the expression and/or localisation of one or more different protein(s) of interest in a cell ~~which method comprises~~comprising:

- i) introducing into a cell a nucleic acid molecule comprising a nucleotide sequence encoding a Green Fluorescent Protein (GFP) or a functional GFP analogue of claim 1, said nucleic acid molecule being operably linked to and under the control of a first expression control sequence;
- ii) culturing said cells under conditions suitable for the expression of said protein(s) of interest in the presence and absence of said test substance(s);

- iii) determining the expression and/or localisation of said protein(s) of interest in said cells by detecting the fluorescence emission by optical means; and
- iv) comparing the fluorescence emission obtained in the presence and absence of said test substance(s) to determine the effect of said test substance(s) on the expression and/or localisation of said protein(s) of interest.

Claim 22 (currently amended): The method of claim 21, wherein said nucleic acid molecule of said introducing step is fused to a nucleotide sequence encoding a first protein of interest.

Claim 23 (currently amended): The method of claim 21, wherein said introducing step further includes at least one different nucleic acid molecule encoding a protein reporter molecule optionally fused to a different protein of interest, each said nucleic acid molecule being operably linked to and under the control of a second expression control sequence wherein said protein reporter molecule has or is capable of generating an emission signal which is spectrally distinct from that of said Green Fluorescent Protein (GFP) or functional GFP analogue;

Claim 24 (currently amended): The method ~~according to~~ of claim 21, wherein samples of said cells in a fluid medium are introduced into separate vessels for each of said test substances to be studied.